

Abstract of the Disclosure

A real-time computer vision system tracks the head of a computer user to implement real-time control of games or other applications. The imaging hardware includes a color camera, frame grabber, and processor. The software consists of the low-level image grabbing software and a tracking algorithm. The system tracks objects based on the color, motion and/or shape of the object in the image. A color matching function is used to compute three measures of the target's probable location based on the target color, shape and motion. The method then computes the most probable location of the target using a weighting technique. Once the system is running, a graphical user interface displays the live image from the color camera on the computer screen. The operator can then use the mouse to select a target for tracking. The system will then keep track of the moving target in the scene in real-time.